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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/126,826	07/31/98	YAMAZAKI	S 07977/019002

EXAMINER	
NGUYEN, D	PAPER NUMBER

MM91/0816

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ART UNIT 2871

DATE MAILED:

08/16/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/126,826	Yamazaki et al.
Examiner	**Group Art Unit**
Dung Nguyen	2871

☒ Responsive to communication(s) filed on *Jun 9, 2000*.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1, 2, 4, 7-10, 13-19, 22-24, 27-37, 39, 42-49, 51-58, 61, and 62* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1, 2, 4, 7-10, 13-19, 22-24, 27-37, 39, 42-49, 51-58, 61, and 62* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☒ received in Application No. (Series Code/Serial Number) *08/618,267*.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). *10*

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

A request for continued examination (RCE) under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/09/2000 has been entered.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 49 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

49 canceled (amdt c)

Regarding claim 49, it is confusing and unclear what is meant by the term "passive type". According to claim 44, an LCD have a plurality of TFTs forming on the TFT substrate (active matrix LCD). Therefore, such LCD device cannot be a passive type.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, 4, 7-10, 13-19, 28-32, 39, 42-49 and 51-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mawatari et al., US Patent No. 5,200,847.

Regarding claims 1, 2, 7-9, 13-18, 28-32, 42-47, 49, and 51-54, Mawatari et al. disclose an active matrix LCD device (figures 3-4) having:

- a pair of opposed substrate (101, 102);
- a pixel circuit comprising a scanning line (104), a data line (105), a TFT (106) and pixel electrode (107) as claimed; each TFT comprising a channel region crystal silicon, a silicon oxide/polyimide passivation (according to TFT structure);
- a liquid crystal material (LC) disposed between the pair of opposed substrate;
- a driver circuit (120) formed on a substrate (118) and adhered to the substrate (101) by a resin adhesive layer (125);
- a passivation film covered TFT having a contact hole for electrical connection through a tapered configuration (according to active matrix LCD);

Although Mawatari et al. do not disclose the substrate can be formed by plastic, Onishi et al. do disclose that a substrate in an LCD device can be formed by plastic (see example 1). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form a plastic substrate in the Mawatari et al. LCD device in order to decrease the weight and reduce the cost of the LCD device (col. 6, ln.1-2).

Regarding claims 4, 10, 19, 39 and 48, Mawatari et al. discloses the claimed invention as described above except for the driver circuit which is covered/overlapped by the other one of a pair of opposed substrates. One of ordinary skill in the art would have realized the desire to form an upper substrate to cover/overlap the driver circuit for protecting. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to cover/overlap the driver circuit by the upper substrate because it is a common practice in the art to protect the driver circuit from damage.

5. Claims 22, 23, 27, 55-57, 33-35 and 61-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mawatari et al., US Patent No. 5,200,847 , in view of Watanable et al., US Patent No. 4,643,526.

Regarding the above claims, the modification to Mawatari et al. discloses the claimed invention as described above except for a driver circuit which is electrically connected to a TFT of an active matrix circuit through a metal bump. However, Watanable et al. show in Figure 3 a gold bump (33) which are connected driver circuit (IC chip 32) to internal circuit (conductive films 22a and 22b) of an LCD device. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form an LCD device of Takemura having a metal bump as shown in Watanable et al. since the bump (33) serve to form a large space between the IC chip (32) and substrate, so that the molding material can be easily injected into the space without bubbles forming (column 3, line 42-45)

Double Patenting

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 1, 2, 4, 7-10, 13-19, 22-24, 27-37, 39, 42-49, 51-58 and 61-62 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 5 and 17 of U.S. Patent No. 5,834,327 , as stated in the final office action.

hold (and D)

Applicant contends that the claimed invention of the present case can be achieved techniques other than the method in the 5,834,327 patent. The Examiner is not convinced by this argument since the product as claimed can be made by another and materially process in the 5,834,327 patent, however, the process in the 5,834,327 patent would have been obvious to form the product as claimed invention, e.g. the producing method in figures 2A-2G and 16A-16D.

Therefore, the double-patenting rejection is proper.

Conclusion

8. Applicant's arguments filed 06/09/2000 have been fully considered but they are not persuasive.

9. Applicant's arguments with respect to the rejection under 102(e) have been considered but are moot in view of the new grounds of rejection.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Dung Nguyen whose telephone number is (703) 305-0423. The fax phone number for this Group is (703) 308-7726.

DN
08/10/2000

William L. Sikes
Supervisory Patent Examiner
Group 2800